DOCUMENT RESUME

ED 149 042 CE 014 152

AUTHOR Lutz, John; Staber, Richard A.
TITLE Vocational Determination Process through School, Industry and Community Involvement. Final Report.
INSTITUTION Central Columbia School District, Bloomsburg, Pa.
SPONS AGENCY Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.; Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.
PUB DATE 7 Dec 77
NOTE 15p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Ability Grouping; Academic Ability; Advisory Committees; *Career Choice; *Career Exploration; Community Involvement; High School Students; *Learning Activities; Occupational Choice; *Occupational Guidance; Paraprofessional School Personnel; *Program Effectiveness; School Industry Relationship; Senior High Schools; Student Ability; Vocational Development; Vocational Interests
IDENTIFIERS ACT Assessment; Career Planning Program

ABSTRACT

Through a school-industry-community council strategies and procedures were developed and tested to identify the most cost effective method to provide selected students with opportunities for nontraditional counseling training and to determine the effect it had on career goal choices. The American College Testing (ACT) Career Planning Program test series was administered to 235 tenth grade students at one high school. Sets of ten matched pairs of students were chosen, the groups ranging from high to low ability. Each was then broken into a control group and a test group. Students in the test group became involved in various activities aimed at strengthening their values and attitudes toward self and work, strengthening occupational awareness, or building specific vocational skills. Geared to student needs and interests activities were pursued individually and in small groups under the direction of a vocational guidance paraprofessional. Findings of the first year included the following: (1) An analysis of variance on four measures revealed that each ability level was statistically different from the other two and that there was no systematic sex bias between levels; (2) ACT tests showed no significant differences between test and control groups on any measures; (3) the advisory committee was not effective to an acceptable degree (too large for the scope of the project), and (4) starting delay caused problems in properly training the paraprofessional. (JT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED149042

JAN 0 5 1978

FINAL REPORT

Title

Vocational Determination Process through School, Industry and Community Involvement
(Project No. 19-6806)

Authors

Dr. John Lutz
Richard A. Staber

Institution

Central Columbia School District
4777 Old Berwick Road
Bloomsburg, Pennsylvania 17815

December 7, 1977

Pennsylvania Department of Education
Bureau of Vocational Education
Research Coordinating Unit

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE 014 152

TABLE OF CONTENTS

Acknowledgements

Introductory Section . . . . . Page 1

Abstract

Methods

Findings and Analysis . . . . . Page 8

Conclusions and Recommendations . . . . . Page 10

Glossary . . . . . Page 11

Acknowledgements

The authors wish to extend their appreciation to all of the individuals who contributed to this project.

We wish to thank the following members of the School, Industry and Community Advisory Council for their input and evaluation of project activities: Lois Humbolt - Bloomsburg, Michael Boslego - Bloomsburg, David Stout - Bloomsburg, Isiah McClosky - Bloomsburg, James Shutt - Danville, Meriam Rohm - Bloomsburg, Ron Ulmstead - Berwick, Frank Luff - Berwick, and Tom Davies - Bloomsburg.

We also extend our thanks to Dr. Steve Frankchek and Lane Kemler who gave their time and expertise in project development.

We extend our appreciation to Mark Jones, the vocational guidance paraprofessional, for working with the students and helping them increase their vocational awareness.

The Central Susquehanna Intermediate Unit deserves recognition for providing resource services and personnel.

Finally, we wish to thank Bea Leiby for her assistance in the preparation of the final manuscript.

ABSTRACT

The general problem on the education-to-work-transition is long-standing and one which may well be perpetual in nature. However, over the years specific efforts have been made. Namely, vocational education, career education, career guidance and counseling, etc., have been proposed with alterations upon alterations and variations upon variations. But still the problems of youth unemployment, a labor force of dissatisfied individuals, and employers pointing to poorly prepared employees with a negative work ethic are continually surfacing, despite the myriad of remedial and preventive type programs and plans for coming to grips with the general problem on the education-to-work-transition.

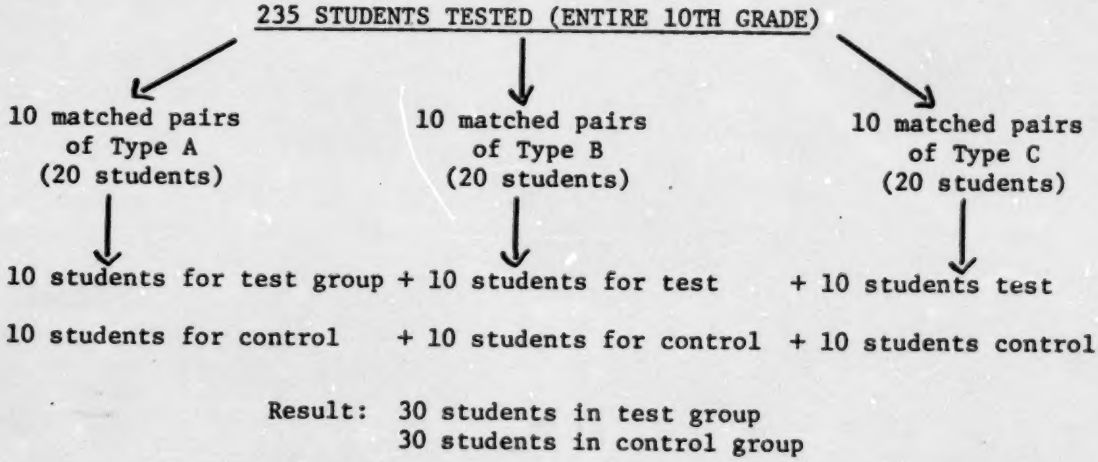
This project did not intend to address the total problem of the education-to-work-transition but rather focused on three basic activities. First: to investigate data collected on the occupational or career goal choices of a class of tenth grade students and to follow their initial goal selections over time in order to compare a) individual interests with ultimate curriculum choices and limitations of selected school students; b) results of cognitive testing with career choices; c) initial curriculum and career choices with long-term vocational goals; d) test data obtained in school with initial jobs obtained after graduation. These comparisons were made on data obtained in assessments made on the same group of students in tenth, eleventh grade and twelfth grade and in a post-graduation assessment, using the American College Testing Career Planning Program (ACT-CPP) test series.

In focusing on articulation, the proposed study aimed at discovering ways to help different kinds of students reach their vocational goals, and to determine at what grade level(s) it is most effective to provide a

student with help in making realistic vocational choices. Also through the development of a School - Industry - Community Council, strategies and procedures were developed and tested to identify the most cost effective method(s) to satisfy individual program needs.

Other objectives pursued were to detect changes in students stated occupational/career goal choices and to hypothesize what caused changes. Also, to provide selected students with opportunities for non-traditional vocational counseling training, and to determine the effect such training has on occupational/career goal choices.

The study began with 235 tenth grade students at Central Columbia High School being administered the American College Testing (ACT) Career Planning Program test series. From this population, on the basis of the ACT scores, three sets of ten matched pairs of students were chosen. Each of the groups were chosen based on various characteristics ranging from high ability to low ability. Each group was then broken down into a control group and a test group. This grouping was done by random assignment. The table below shows the method of breaking down the students:


235 STUDENTS TESTED (ENTIRE 10TH GRADE)
10 matched pairs of Type A (20 students)
10 matched pairs of Type B (20 students)
10 matched pairs of Type C (20 students)
10 students for test group + 10 students for test + 10 students test
10 students for control + 10 students for control + 10 students control
Result: 30 students in test group
30 students in control group

The findings of the first year study are: (1) An ANOVA (Analysis of Variance) was used to analyze ITBS, DIQ, DAT and Grade Average for students

categorized according to aptitude level. In each category there was a significant difference between the levels. Each level was found to be statistically different from the other two. It was also found that there was no systematic sex bias between levels. The high, middle and low levels were significantly different from each other. (2) With regard to analysis of the Act Testing program, high, medium and low scores from the ACT instrument were tabulated for both the experimental and control groups and compared. It was found there were no significant differences on any measures. (3) The School, Industry, Community Advisory committee was not effective to an acceptable degree. Attendance indicated that the magnitude and scope of the project did not warrant creation of an advisory council of this size. (4) There was a two month starting delay of the project which caused problems in properly training the paraprofessional.

The major conclusions and recommendations are directly related to the above findings. The initial selection procedure for this study was effective in differentiating between aptitude levels. Students in both the experimental and control groups and in the three levels have comparable interests, experiences, and abilities as measured by the ACT profile. The size and scope of any project should be a major determinant in developing a S.I.C. Advisory Committee so that it may be as effective as possible. There was insufficient time for the preparation of the paraprofessional to learn the scope of the project. This, in turn, prevented proper training.

METHODS

The method of carrying out the study was with 235 tenth grade students at the Central Columbia High School who were administered the American College Testing Career Planning Program (ACT-CPP). From this population,

on the basis of the ACT scores, three sets of ten matched pairs of students were chosen. Each set of the ten matched pairs had the following characteristics; Group A included students who were high academic achievers, with a large number of extracurricular interests and well defined vocational goals; Group B included moderate achievers with average involvement and Group C included low academic achievers with average involvement and no vocational goals. Once the three sets of ten matched pairs had been determined, students in each set were randomly assigned to either a control group or a test group. The result of this random assignment was thus a control group of 30 students, and a test group of 30 students. Both the test group and the control group contained students with characteristics of either type A, B or C.

After the test and control groups had been selected, the project activities began. Students in the test group became involved in various activities which aimed at strengthening students' values and attitudes toward self and work; strengthening students' occupational awareness; or building specific vocational skills. Activities were pursued both individually and in small groups who worked with a vocational guidance paraprofessional, and were geared to students needs and interests. Activities included both in-school activities and out-of-school activities such as visits to area vocational-technical schools or other field trips. Students in the test group were encouraged to pursue any non-traditional activities which might have increased vocational awareness, or strengthened occupational skills; however, in all cases, such activities were carried out so as not to disrupt the students' regular school schedules. The paraprofessional who worked with the test group of students made every effort to give equal amounts of time and attention to all three types of students (A, B, and C) so that efforts were not all focused on one group.

The S.I.C. Advisory Council met periodically to discuss the progress of the project and to determine what steps could be taken to help the control group of students become further involved in their career choice. This was done by finding internships and part-time jobs in the community that related to a students' career choice.

The control group of students, along with the remaining 175 tenth grade students, were exposed to whatever vocational awareness materials and activities were available in the high school. Project staff made no efforts to encourage further, more non-traditional vocational awareness activities among students in the control group; however, efforts of this kind initiated by individual control group students were not actively discouraged, but were dealt with following the normal guidance procedures of the high school guidance staff.

Finally, in order to avoid as much as possible the "Hawthorne Effect" familiar to educational researchers, the activities carried out by the vocational paraprofessional remained on an informal level, so that test-group students did not perceive themselves as "special" or "different" and change and react only for that reason. Not only were informal activities, chosen for the most part by the students themselves, helped to avoid the Hawthorne Effect, they were also easily fitted into the students regular schedules, made the project easier to implement in another location, and helped to keep the costs of expanding the project activities from becoming prohibitive.

Throughout the project, the staff kept detailed records of the kinds of activities carried out by students in both control and test groups, the frequency of these activities, and such additional data as part-time work involvement on the part of either control or test-group students.

DATA AND INSTRUMENTATION

The data gathered was collected through the use of the American College Testing Career Planning Program test booklet, which contained questions, inventories, and tests which together made up the CPP information gathering instrument. This instrument, administered in a 2½ hour session, contained four major sections: the Vocational Interest Profile (8 scales); Experience Scales (7 scales); Ability Measures (6 scales); and a Student Information section (including educational and vocational plans, biographical information, and educational needs). The service provided by ACT included materials for administering of the test and scoring of tests. This instrument was analyzed by a longitudinal analysis of data from the total class tested as well as date from the groups selected as test and control groups. The design for analysis of the data was developed by the Division of Research Planning and Evaluation of the Central Susquehanna Intermediate Unit and included the items mentioned above.

In addition to the data gained through the use of the ACT-CPP instrument, project staff did throughout the project year keep records on the kinds of vocational awareness activities that control and test group students became involved in, the frequency of their involvement, and such additional information as part-time work experiences. The formats for such record-keeping was established by the project staff once the test and control groups had been established and the project activities were underway.

A brief questionnaire was also developed by the paraprofessional. The purpose of the questionnaire was to gain an insight into the students' feelings towards their careers and what their goals were at this point in time. Included in the questionnaire were the following:

1. What course of study are you currently taking?

2. Do you have any ideas as to what you want to do after high school?

3. Are you currently working and/or gaining useful knowledge that will be helpful in your career choice?

4. What other information do you feel you would need?

FINDINGS AND ANALYSIS

I. Description of Similarities between Experimental and Control Groups

An analysis of ITBS, DIQ, DAT and Grade Average was conducted to describe the similarities between the experimental and control group students*. An ANOVA was used for this analysis. It was found that there were no significant differences between the experimental and control groups on any of the measures listed above. An additional analysis using Chi-square to determine if there was any systematic sex bias in the composition of the groups was conducted and found to be not significant.

II. Description of Differences between Aptitude Levels

An ANOVA was used to analyze ITBS, DIQ, DAT and Grade Average for students categorized according to aptitude level. In each there was a statistically significant difference between levels. The Newman-Kents technique was used to identify specific differences. Each level was found to be statistically different from the other two. It was also found that there was no systematic sex bias between the levels.

III. Analysis of ACT Testing Program

High, medium and low scores from the ACT instrument were tabulated for each of the eight career clusters for both the experimental and control groups. A complex Chi-square analysis* was used to determine any significant differences in interests, experiences, and abilities. Forty-eight Chi-squares were developed to compare high experimental students with high control students, average experimental with average control, and low experimental with low control. No significant differences on any measure were found.

IV. Analysis of the S.I.C. Advisory Committee

The School, Industry, Community Advisory Committee was not effective to an acceptable degree. The attendance of the committee indicated that the magnitude and scope of this project did not warrant creation of an advisory council compatible to the size of the project.

V. Analysis of the ACT-CPP Instrument

The American College Testing Career Planning Program proved to be an excellent tool in establishing career growth areas as defined within the project.

VI. Vocational Guidance Paraprofessional

The use of the paraprofessional to establish an observable difference in career growth was not attained. Tables were developed to compare four categories found in the ACT-CPP test. These categories are long term career goals, estimated ACT composite range, english and math composites.

VII. Findings on Delay of Project

There was a two month starting delay of the project which caused problems in properly training the paraprofessional for his/her duties.

*Tables used to analyze the ITBS, DIQ, DAT, Grade Average and ACT-CPP instrument do not appear in the report. They are, however, available upon request from Dr. John Lutz, Director of Central Susquehanna Intermediate Unit in Lewisburg, PA or Richard A. Staber, Guidance Counselor, Central Columbia School District.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions derived from this study are:

1. The experimental and control groups were not significantly different from each other.
2. The high, medium and low groups were significantly different from each other. The initial selection procedure was effective in differentiating between aptitude levels.
3. Students in both the experimental and control groups and in the three levels (high, medium and low) have comparable interests, experiences, and abilities as measured by the ACT profile.
4. The size and scope of any project should be a major determinant when developing an advisory council such as the S.I.C. advisory committee.
5. The ACT-CPP proved to be an excellent tool in establishing career growth areas as defined within the project.
6. With regard to the comparative scores of the ACT-CPP instrument there was little or no significant difference between the low, average and high experimental and control groups in the category of long term career goals. The category of estimated ACT composite range also showed no apparent difference between the experimental and control groups in the three levels. Finally, in the categories of math and english composites there were again no significant differences between the high, medium and low groups and between the experimental and control groups.
7. There was insufficient time for preparation of the paraprofessional. As a result the scope of the project could not be totally understood by the paraprofessional. Once time was available it conflicted with the academic year.

GLOSSARY

1. School, Industry, Community (S.I.C.) Advisory Council - an advisory council made up of members of the immediate community representing industry and the professions. This council was developed to identify community resources which could be of use and to evaluate project activities along with the project staff.

2. ACT-CPP Instrument - (the American College Testing Career Planning Program)

   A test composed of four major sections: Vocational Interest Profile; Experience Scales; Ability Measures; and a Student Information section used to gather information on students career interests and their abilities in various vocational areas.

3. ANOVA - an analysis of variance.

4. ITBS - Iowa Test of Basic Skills

5. DIQ - Deviation IQ

6. DAT - Differential Aptitude Test